

II. CLAIM AMENDMENTS

1 - 18. (Cancelled)

19. (Currently amended) A method for determining whether an enciphered mode to be used in communication between for user data is set on or off in a mobile communication network and a mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the method comprising:

monitoring at by the mobile station in the mobile communication network of network control signals received by the mobile station from the mobile communication network over an air interface to detect a cipher mode command message, the cipher mode command message configured to requesting the mobile station to start enciphering of user data;

responsive to detection by the mobile station of a cipher mode command message in the monitored network control signals received from the mobile communication network;

interpreting said detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set on in the mobile communication network;

starting enciphering of user data in the mobile station; and

indicating to a user of the mobile station that the mobile communication network is operating in an said enciphered mode of communication for user data is set on in the mobile communication network, using a cipher mode indicator provided in the mobile station.

20. (Cancelled)

21. (Currently amended) A method according to claim 19, further comprising:

responsive to a lack of detection of a cipher mode command message by the mobile station in the monitored network control signals received from the mobile communication network:

interpreting said lack of detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set off in the mobile communication network; and

indicating to a user of the mobile station that the mobile communication network is operating in an~~unenciphered mode of communication for user data is set off in the mobile communication network~~, using the cipher mode indicator provided in the mobile station, ~~if no cipher mode command message is detected at the mobile station in the monitored control signals received from the mobile communication network.~~

22. (Cancelled)

23. (Currently amended) A method according to claim 19, comprising determining whether the said enciphered mode to be used in~~of communication for user data between the mobile communication network and the mobile station~~is set on or off during establishment of communication between the mobile communication network and the mobile station.

24. (Currently amended) A method according to claim 19, comprising determining whether the said enciphered mode to be used in~~of communication for user data between the mobile communication network and the mobile station~~is set on or off prior to establishment of communication between the mobile communication network and the mobile station.

25. (Currently amended) A method according to claim 24, comprising determining whether the said enciphered mode to be used in~~of communication for user data between the mobile communication network and the mobile station~~is set on or off by performing a location update procedure.

26. (Currently amended) A method according to claim 19, comprising determining whether the said enciphered mode to be used in~~of communication for user data between the mobile communication network and the mobile station~~is set on or off during a communication handover

procedure that occurs when the mobile station moves between a first part of the mobile communication network and a second part of the mobile communication network.

27. (Cancelled)

28. (Currently amended) A method according to claim 19, further comprising indicating a change in ciphering mode for user data to a user of the mobile station.

29 – 30. (Cancelled)

31. (Currently amended) A method according to claim 19, wherein the mobile station comprises a display unit, the method comprising indicating ~~the ciphering mode used in communication between the mobile communication network and the mobile station~~ to a user of the mobile station whether said enciphered mode of communication for user data is set on or off using the display unit.

32. (Currently amended) A method according to claim 19, wherein the mobile station comprises a light source, the method comprising indicating ~~the ciphering mode used in communication between the mobile communication network and the mobile station~~ to a user of the mobile station whether said enciphered mode of communication for user data is set on or off using the light source.

33. (Currently amended) A method according to claim 28, wherein the mobile station comprises a display unit and an acoustic signal forming element, the method comprising indicating ~~the ciphering mode used in communication between the mobile communication network and the mobile station~~ to a user of the mobile station whether said enciphered mode of communication for user data is set on or off using the display unit and indicating a change in ciphering mode for user data to a user of the mobile station using the acoustic signal forming element.

34. (Currently amended) A method according to claim 32, comprising indicating a change in ciphering mode for user data with a flashing light.

35. (Currently amended) A method according to claim 28, comprising indicating a change in ciphering mode for user data by causing a vibration battery to vibrate.

36. (Previously presented) A method according to claim 19, wherein the mobile station comprises a radio resource management block, a cipher indicator memory block, and a user interface block, the method comprising maintaining a cipher mode indication data field in the cipher indication memory block, monitoring signals sent from the mobile communication network to the mobile station at the radio resource management block to determine whether said monitored signals comprise a cipher mode command message, wherein upon determining that said monitored signals comprise a cipher mode command message, the radio resource management block sets a value of the cipher mode indication data field to correspond with cipher indication data in said cipher mode command message.

37. (Previously presented) A method according to claim 36, wherein said cipher indicator memory block makes an interrupt request responsive to detecting that a new value has been set in the cipher mode indication data field.

38. (Previously presented) A method according to claim 37, wherein the user interface block detects said interrupt request and sends an inquiry about the cipher mode to the cipher indicator memory block and the cipher indicator memory block returns data on the cipher mode to the user interface block in response to said inquiry.

39. (Previously presented) A method according to claim 38, wherein the user interface block sets the cipher mode indicator to a mode corresponding to the ciphering data provided by the cipher indicator memory block.

40. (Previously presented) A method according to claim 36, wherein the cipher indicator memory block sends cipher information to the user interface block whenever the value in the cipher indicator memory block is changed.

41. (Previously presented) A method according to claim 40, wherein the user interface block sets the cipher mode indicator to a mode corresponding to the cipher information provided by the cipher indicator memory block.

42. (Previously presented) A method according to claim 36, wherein the user interface block sends cipher mode inquiry messages to the cipher indicator memory block at regular intervals and the cipher indicator memory block sends cipher information to the user interface block in response to each inquiry.

43. (Previously presented) A method according to claim 42, wherein the user interface block sets the cipher mode indicator to a mode corresponding to the cipher information provided by the cipher indicator memory block.

44. (Currently amended) A method according to claim 19, wherein the mobile station is capable of a first and a second type of user data communication, the method comprising indicating to a user of the mobile station whether an enciphering mode is set on or off in the mobile communication network ~~off~~ for each of said first and second types of user data communication ~~to a user of the mobile station~~.

45. (Currently amended) A method according to claim 44, wherein the first type of user data communication is a telephone call and said second type of user data communication is a short message (SMS).

46. (Currently amended) A method according to claim 44, comprising indicating the ciphering mode of the first type of user data communication in a manner distinguishable from that used to indicate the ciphering mode of the second type of user data communication.

47. (Currently amended) A method according to claim 44, further comprising indicating a change in ciphering mode of the first type of user data communication and indicating a change in ciphering mode of the second type of user data communication.

48. (Currently amended) A method according to claim 19, wherein a first mobile station and a second mobile station are in communication with each other through at least one mobile communication network, the method comprising indicating the ciphering mode for user data communication between the mobile communication network and the first mobile station to a user of the second mobile station.

49 - 54. (Cancelled)

55. (Currently amended) A method according to claim 19, comprising using the mobile station in communication with a terminal in a fixed line communication network, the method further comprising indicating a ciphering mode used in user data communication between the fixed line communication network and the terminal in the fixed line communication network to a user of the mobile station.

56. (Currently amended) A method according to claim 55, wherein the mobile station sends an inquiry message to the terminal in the fixed line communication network to determine the ciphering mode used in user data communication between the fixed line communication network and said terminal in the fixed line network.

57. (Currently amended) A method according to claim 56, wherein if the mobile station does not receive a response to said inquiry message, the mobile station indicates that the ciphering mode for user data is unknown.

58. (Currently amended) A method according to claim 56, wherein if the mobile station receives a response to said inquiry message, but cannot interpret said response, the mobile station indicates that the ciphering mode for user data is unknown.

59. (Currently amended) An apparatus for use in a mobile station for determining whether an enciphering mode to be used in communication for user data between is set on or off in a mobile communication network ~~and the mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication~~, the apparatus comprising:

means for monitoring network control signals received by a mobile station from the mobile communication network at the mobile station over an air interface to detect a cipher mode command message, ~~said~~ the cipher mode command message configured to requesting the mobile station to start enciphering of user data;

means for interpreting detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set on in the mobile communication network;

means for starting enciphering of user data in the mobile station responsive to detection of a cipher mode command message in the monitored network control signals received from the mobile communication network; and

a cipher mode indicator for indicating a ~~ciphering mode~~ to a user of the mobile station, ~~the cipher mode indicator being configured to indicate that the mobile communication network is operating in an~~said enciphered mode of communication for user data is set on in the mobile communication network responsive to detection of a cipher mode command message in the monitored network control signals received from the mobile communication network.

60. (Cancelled)

61. (Currently amended) An apparatus according to claim 59, further comprising means for interpreting a lack of detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set off in the mobile communication network and wherein the cipher mode indicator is further configured to indicate that ~~the mobile communication network is operating in an~~said unenciphered mode of communication for user data is set off in the mobile communication network, if no responsive to a lack of detection of a cipher mode command message ~~is detected in the monitored~~ network control signals received from the mobile communication network.

62. (Currently amended) An apparatus according to claim 59, wherein the apparatus is configured to determine whether the said enciphered mode to be used in of communication for user data between the mobile communication network and the mobile station is set on or off during establishment of communication between the mobile communication network and the mobile station.

63. (Currently amended) An apparatus according to claim 59, wherein the apparatus is configured to determine whether the said enciphered mode to be used in of communication for

user data between the mobile communication network and the mobile station is set on or off prior to establishment of communication between the mobile communication network and the mobile station.

64. (Currently amended) An apparatus according to claim 63, wherein the apparatus is configured to determine whether the said enciphering mode to be used in communication for user data is set on or off prior to establishment of communication between the mobile communication network and the mobile station by performing a location update procedure.

65. (Cancelled)

66. (Previously presented) An apparatus according to claim 59, wherein said cipher mode indicator comprises a display unit.

67. (Previously presented) An apparatus according to claim 59, wherein said cipher mode indicator comprises a light source.

68. (Currently amended) An apparatus according to claim 59, wherein said cipher mode indicator is configured to indicate a change in ciphering mode for user data to a user of the mobile station.

69. (Currently amended) An apparatus according to claim 68, wherein said cipher mode indicator is configured to indicate a change in ciphering mode for user data by causing an acoustic signal forming element to produce an acoustic signal.

70. (Currently amended) An apparatus according to claim 68, wherein said cipher mode indicator is configured to indicate a change in ciphering mode for user data by causing a vibration battery to vibrate.

71 - 73. (Cancelled).

74. (Previously presented) An apparatus according to claim 59, comprising a radio resource management block, a cipher indicator memory block and a user interface block, the cipher

mode indicator memory block comprising a cipher mode indication data field, the radio resource management block being configured to set a value of the cipher mode indication data field to correspond with cipher indication data in a cipher mode command message received from the mobile communication network.

75. (Previously presented) An apparatus according to claim 74, wherein the cipher indicator memory block is configured to make an interrupt request responsive to detecting that a new value has been set in the cipher mode indication data field.

76. (Previously presented) An apparatus according to claim 75, wherein the user interface block is configured to detect said interrupt request and to send an inquiry about the cipher mode to the cipher indicator memory block and the cipher indicator memory block is configured to return data on the cipher mode to the user interface block in response to said inquiry.

77. (Previously presented) An apparatus according to claim 76, wherein the user interface block is configured to set the cipher mode indicator to a mode corresponding to the ciphering data provided by the cipher indicator memory block.

78. (Previously presented) An apparatus according to claim 74, wherein the cipher indicator memory block is configured to send cipher information to the user interface block whenever the value in the cipher indicator memory block is changed.

79. (Previously presented) An apparatus according to claim 78, wherein the user interface block is configured to set the cipher mode indicator to a mode corresponding to the cipher information provided by the cipher indicator memory block.

80. (Previously presented) An apparatus according to claim 74, wherein the user interface block is configured to send cipher mode inquiry messages to the cipher indicator memory block at regular intervals and the cipher indicator memory block is configured to send cipher information to the user interface block in response to each inquiry.

81. (Previously presented) An apparatus according to claim 80, wherein the user interface block is configured to set the cipher mode indicator to a mode corresponding to the cipher

information provided by the cipher indicator memory block.

82. (Currently amended) A mobile station comprising apparatus for determining whether an enciphered mode to be used in of communication for user data between is set on or off in a mobile communication network and the mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the apparatus comprising:

means for monitoring network control signals received by the mobile station from the mobile communication network at the mobile station over an air interface to detect a cipher mode command message, ~~said~~the cipher mode command message configured to requesting the mobile station to start enciphering of user data;

means for interpreting detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set on in the mobile communication network;

means for starting enciphering of user data in the mobile station responsive to detection of a cipher mode command message in the monitored network control signals received from the mobile communication network; and

a cipher mode indicator for indicating ~~a ciphering mode to a user of the mobile station, the cipher mode indicator being configured to indicate that the mobile communication network is operating in an~~said enciphered mode of communication for user data is set on in the mobile communication network responsive to detection of a cipher mode command message in the monitored network control signals received from the mobile communication network.

83. (Cancelled)

84. (Currently amended) A mobile station according to claim 82, wherein said apparatus further comprises means for interpreting a lack of detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set off in the mobile communication network and wherein the cipher mode indicator is further configured to indicate that ~~the mobile communication network is operating in an~~said unenciphered mode of

communication for user data is set off in the mobile communication network, if not responsive to a lack of detection of a cipher mode command message is detected in the monitored network control signals received from the mobile communication network.

85. (Currently amended) A mobile station ~~capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the mobile station~~ comprising:

means for monitoring network control signals received by the mobile station from the mobile communication network ~~at the mobile station;~~over an air interface to detect a cipher mode command message;

means for interpreting detection of a cipher mode command message as an indication that an enciphered mode of communication for user data is set on in the mobile communication network;

means for interpreting a lack of detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set off in the mobile communication network;

means for setting the mobile station into an enciphered mode of communication for user data responsive to detection of a cipher mode command message in the monitored network control signals received from the mobile communication network; and

a cipher mode indicator for indicating ~~a ciphering mode to a user of the mobile station; the cipher mode indicator being configured to indicate that the mobile communication network is operating in an~~said enciphered mode of communication for user data is set on in the mobile communication network responsive to detection of a cipher mode command message in the monitored network control signals received from the mobile communication network and to indicate that ~~the mobile communication network is operating in an~~said ~~un~~enciphered mode of communication for user data is set off in the mobile communication network if not responsive to a lack of detection of a cipher mode command message is detected in the monitored network control signals received from the mobile communication network.

86. (Previously presented) A mobile station according to claim 85, the mobile station comprising a radio resource management block, a cipher indicator memory block and a user interface block, the cipher mode indicator block comprising a cipher mode indication data field, the radio resource management block being configured to set a value of the cipher mode indication data field to correspond with cipher indication data in a cipher mode command message received from the mobile communication network.

87. (Previously presented) A mobile station according to claim 86, wherein said cipher indicator memory block is configured to make an interrupt request responsive to detecting that a new value has been set in the cipher mode indication data field.

88. (Previously presented) A mobile station according to claim 87, wherein the user interface block is configured to detect said interrupt request and to send an inquiry about the cipher mode to the cipher indicator memory block and the cipher indicator memory block is configured to return data on the cipher mode to the user interface block in response to said inquiry.

89. (Previously presented) A mobile station according to claim 88, wherein the user interface block is configured to set the cipher mode indicator to a mode corresponding to the ciphering data provided by the cipher indicator memory block.

90. (Previously presented) A mobile station according to claim 86, wherein the cipher indicator memory block is configured to send cipher information to the user interface block whenever the value in the cipher mode indicator memory block is changed.

91. (Previously presented) A mobile station according to claim 90, wherein the user interface block is configured to set the cipher mode indicator to a mode corresponding to the cipher information provided by the cipher indicator memory block.

92. (Previously presented) A mobile station according to claim 86, wherein the user interface block is configured to send cipher mode inquiry messages to the cipher indicator memory block at regular intervals and the cipher indicator memory block is configured to send cipher information to the user interface block in response to each inquiry.

93. (Previously presented) A mobile station according to claim 92, wherein the user interface block is configured to set the cipher mode indicator to a mode corresponding to the cipher information provided by the cipher indicator memory block.

94. (Currently amended) A system ~~for determining a ciphering mode to be used in communication between~~ comprising:

a mobile communication network; and

a mobile station; ~~in the mobile communication network, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the system comprising:~~

means in the mobile communication network for determining whether an enciphered mode of communication for user data is to be used in communication between the mobile communication network and the mobile station according to a setting of the mobile communication network on or off;

means in the mobile communication network for sending a cipher mode command message from the mobile communication network to the mobile station in a situation where ~~an~~said enciphered mode of communication for user data is to be used in communication between the mobile communication network and the mobile stationset on, said cipher mode command message configured to requesting the mobile station to start enciphering of user data;

means in the mobile station for monitoring network control signals sent from the mobile communication network to the mobile station over an air interface to detect a cipher mode command message;

means in the mobile station for interpreting detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set on in the mobile communication network;

means in the mobile station for starting enciphering of user data in the mobile station responsive to detection of a cipher mode command message in the monitored network control signals received from the mobile communication network; and

a cipher mode indicator in the mobile station for indicating ~~a ciphering mode~~ to a user of the mobile station, ~~the cipher mode indicator being configured to indicate that the mobile communication network is operating in an~~said enciphered mode of communication for user data is set on in the mobile communication network responsive to detection of a cipher mode command message in the monitored network control signals from the mobile communication network.

95. (Cancelled)

96. (Currently amended) A system according to claim 94, further comprising means in the mobile station for interpreting a lack of detection of a cipher mode command message as an indication that said enciphered mode of communication for user data is set off in the mobile communication network and wherein the cipher mode indicator is further configured to indicate that the mobile communication network is operating in an~~said un~~enciphered mode of communication for user data is set off in the mobile communication network if no~~responsive to a lack of detection of a~~ cipher mode command message ~~is detected in the monitored network~~ control signals received from the mobile communication network.

97 - 132. (Cancelled)

133. (Currently amended) A system according to claim 94, wherein ~~the~~said enciphering mode ~~to be used in of communication for user data between the mobile communication network and the mobile station is specified~~set on or off by an operator of the mobile communication network.

134. (Previously presented) A system according to claim 94, wherein communication between the mobile communication network and the mobile station takes place at least in part over a radio link.

135. (Previously Presented) A system according to claim 94, wherein the mobile communication network is a GSM network.

136-156. (Cancelled)